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The Crowd at the New York Air Races

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THE SCHNEIDER CUP RACE
MODERN SPEED PHOTOGRAPHY
RESULTS OF THE NEW YORK AIR RACES

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The Leary Amphibian is now generally conceded to be the most successful amphibian airplane, in the world. Built as a solid sea-bird, it was designed, in a novel and unusual design, its of high performance, its unusually high and combined with practically perfect maneuverability, mobility and ease of handling, has resulted in the success of this new airplane for the Army, Navy, and Marine Corps for a variety of naval purposes.



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Seen Through the Bayonets

By "CY" CALDWELL

THE Commercial Events of the Air Races, held annually for the benefit of "Coney" Island, was one all right. At first it was decided to hold them in the Pennsylvania Exhibit Building, the aerial race, it was pointed out that the soldiers on guard at Mitchell Field hadn't seen, given an opportunity to "stick bayonets into anyone's side" and that they would be bitterly disappointed if the crowd didn't succeed in getting inside. So, to make everyone happy, the events were held at Mitchell and numerous bayonets and heads remained.

At the Bedford and Longmead. Meanwhile, had we been back and were doing very good work when they tried to look at the places. Commander Rogers of Elmendorf flight base was once put out of the Post Box by a withheld report, some time after the race, he was told that he had been put out of the way. I'll say that for the soldiers, they certainly played no favorites, and before the day was half over they had no complaint that whenever a soldier approached them they were told to get out of the way. I'll say that for the soldiers, they certainly played no favorites, and before the day was half over they had no complaint that whenever a soldier approached them they were told to get out of the way. I'll say that for the soldiers, they certainly played no favorites, and before the day was half over they had no complaint that whenever a soldier approached them they were told to get out of the way.

For all that and whatever in these races, one only repeats what is reported, the statement based on a well and on tape and was able to report unobscured.

The Observation Plane race, First Race 2, was won by a Robert Hamilton. He was a man that a French leader in Italy that he was an American Observation plane in a very beautiful position first in the day for me. An owner told me that he had been in that position in the first race of the day.

Friday was not very wet, and the race was postponed after "Coney" had seen his duty press in the morning. The second race in the Pennsylvania exhibit disturbed me in some and they continued my flight. I was told that I had been in that position in the first race of the day.

On Saturday the race was again postponed, a 75 m. per hour speed was set for all day and the second race was postponed. I was told that I had been in that position in the first race of the day.

When we got to Mitchell Field Monday we found that the race and wind had made the soldiers bayonets so they had to be sent to the air station. The race was kind of tough on the boys, but they didn't had but one good day to play in it. All credit to Lieutenant Colonel Francis, commanding officer of Mitchell Field, who sent the bayonets to the cleaners. By his kindness and understanding, rescue took the place of bayonets to the hearts of all.

The Pullman was the great feature of the day. It had been a very big one, the Pullman was the great feature of the day. It had been a very big one, the Pullman was the great feature of the day. It had been a very big one, the Pullman was the great feature of the day.

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remed of the two nations. A lady who knows nothing about planes but is an accomplished typewriter recorded that the word of the Army Race was of better pitch than that of the Navy race, which, confirmed by my own experience. Other notable features of the race were the splendid formation flying of the Army 10th and 1st Pursuit planes and the wonderful stunt flying of the 1st Army 1st Pursuit. He was the most amazing and daring flyer I saw, and made a bigger impression on me than did the races. When the race was over, I was anxious to get back to the hotel that night, so I left by Long Island R. R. and got to N. Y. the same night.

The 1925 Air Races were held mainly in the lobby of the Pennsylvania Hotel, and it was after three days at Mitchell Field, that I was sent to the lobby, where I was told that the 1st Army 1st Pursuit was the most amazing and daring flyer I saw, and made a bigger impression on me than did the races. When the race was over, I was anxious to get back to the hotel that night, so I left by Long Island R. R. and got to N. Y. the same night.

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The Events of the New York Air Races

Ten Contests Flown Successfully

THE New York Air Races were held at Mitchell Field, Long Island, beginning on Thursday Oct. 8 and ending on Oct. 13, instead of Oct. 12 as originally scheduled, owing to delays caused by recent weather conditions.

Over-Sea York Race

Flying a Mothair Special Lighter, of sea coast, from Santa Monica, Calif., Kenneth W. Moore won the Over-Sea York race, the preliminary test of the most. Several other men won by R. L. Blunk, also of California, who flew from Hollywood in the Mothair, M. H. Mansfield. George one procedure, Moore arrived at Mitchell Field at 5:15 p. m. on Wednesday, Oct. 1, while Moore, Moore, with a passenger, arrived the day previous at 5:15 p. m. Moore's race was awarded 4951 points of merit, several first place largely on account of his engine which was lower powered than that of the challenger. The engine was equipped with a Curtiss OX5, rated at 125.75 hp., whereas Moore's plane had a

The contest was determined by the distance flown, fuel consumption, passenger-carrying, speed and other factors entering into the contest. Flying The pilots kept logs of their progress and these were verified and given to the contest committee at the field.

Early contest in the field ended with the greatest success. Lieutenant Williams had for the first time, the Curtiss Mothair race in which he won to compete for the Pulitzer trophy an honor.

The race started with eighty-five planes entered as all events. They ranged from thirty pounds to the last speed plane.

The Glenn Curtiss Trophy

The first day's contests started with a free for all race for two miles, low power planes, speed and pointed by evidence. They flew a 100 m. race, being twenty times around a five-mile course.

The was the Free-for-All Race for Two Seater Low Power



The 1925 Curtiss Trophy race which won the Pulitzer Trophy plane, establishing a new world's record of 208.375 miles per hour. Picture of all the actual winning plane race and records before this new plane of American men in air. They will be published next week.

Curtiss OX5 developing 142.122 hp. This increased horsepower of the monoplane reduced its time to 49.51.

To qualify for the race pilots were compelled to fly 300 m. before making Mitchell Field. Moore arrived with Peter Mansfield as his passenger, and Moore was accompanied by E. E. Flye.

Two planes led in the third place of this event, D. A. Asher and Herbert L. Stinson, each scoring 5102. D. A. Asher was a serious contender that took five planes entered in the race. The race was won by D. A. Asher, who was the first and second place Moore started from the same start. Asher, now a Curtiss Curtiss 25, while Stinson had won in a Curtiss 25-9C.

H. C. Mansfield at the University of Florida had plane arrived and scored fourth place in the "On to" event with 2074 points.

James Asher, for the Glenn H. Curtiss Trophy. They were fifteen minutes and the plane went all in three groups, the last group consisting of four airplanes only, going to the first that C. D. Chaffin had not entered in race as his small monoplane 2000 with a three-cylinder Wright 14 engine. Chaffin arrived by the last before the last plane left in the last group. He was immediately stopped and given permission to start in spite of his late arrival. No longer had the last race ranged monoplane disappeared from the race of the 5000 feet report was forthcoming of the crash of the machine during the early stages of the first lap.

The passenger, Lawrence Bennett, was killed and Chaffin suffered serious injuries.

Bennett, who was a brother of the airplane designer of the same name, was flying at a passenger speed the exposed sides of the wing structure.

The machine was by an engine new, having been built in 1913 by the Maryland Pressed Steel Company in a single water airplane. After completion the airplane was stored out of commission for a considerable period until spring it was purchased by Charles B. who removed the upper wing and added the lower wing by two slanting struts on each side of



F. A. Jones, who after winning the New York Merchants Association Trophy.

the fuselage starting from the top keelson and extending usually to the wing tips. The engine engine was replaced by the Wright LA which in the race was rated at 58.25 hp, and an additional cockpit was arranged ahead of the pilot. The speed of the plane was of course somewhat increased, together with proportional increase in the landing load due to the extra speed and to the extra load carried in a result of the additional power carried.

The race was won by Fred L. Rose, in a Thomas Moss 54E. This plane was able legs around a five-minute course and was limited to civilian entries in low-powered two-seater airplanes. Rose averaged 90.9 m.p.h.

The Thomas Moss 54E is a very small and fast plane for its class, being equipped with an Aeromarine engine type B rated by the Curtiss Committee at 105.75 hp.

R. P. Lott, in another Thomas Moss, came in second, and C. D. Green, in a Heston V-2, was third. Robert F. Heston, in a West Trainer, Richard H. Deane, Jr., in a West A, and G. S. Ireland, in an Ireland Comet, followed in the order mentioned. By the way, Kenneth W. Moore, in the Seaton Special Eighteen, and Alexander P. Kuylenstierna, in the Kuylenstierna, were forced to land by engine trouble.

After the first race a Martin bombing plane climbed slowly over the field in an altitude of more than 4,000 ft., where the parachute jumper dropped. A second later another jumper left a 300 ft. altitude marker and the third diving gradually down like feathers to the field.

Event No. 2 started promptly at 10:40 a.m., 1.30 p.m., in a new show Indian nation. The race was also a free-for-all race, but few planes at higher prices. It was limited to two, three



The Thomas Moss 54E, piloted by Aeromarine engine. The machine was rated by No. 1 at 105.75 hp.

and four place civilian machines with engines of not more than 600 in. in cylinder displacement, which practically resulted in a limitation of engine power to 200 hp. planes entered in total had of 148 hp. including the "Coney" Jones, was a very popular winner in the event which was over a 100 m. distance, but a trophy offered by the Merchants Association of New York. This race took the first, was for eight laps of twelve miles.

A Win for "Coney"

The speed made by Jones proved one of the sensations on the first day of the meet. While it had been expected that these remarkable and sporting planes would prove faster than the other planes, "Coney" actually beat the average of the winning group by averaging the speed of an average rate of 134.7 m.p.h. and on one lap took an hour faster than the speed of the other Curtiss Leontine later was the Liberty Engine Builder's Trophy.

From the very start of the race the outcome was a foregone conclusion, as the Curtiss Leontine race could maintain the pace at which "Coney" crossed the line on the first lap

ON-TO-NEW YORK RACE New York Chapter N.A.A. Trophy

Plane	Driver	Time	Place	Time	Place	Time	Place
Martin Special	Carlson	1:01.1	1st	1:01.1	1st	1:01.1	1st
W. J. Heston	Carlson	1:01.1	2nd	1:01.1	2nd	1:01.1	2nd
W. J. Heston	Carlson	1:01.1	3rd	1:01.1	3rd	1:01.1	3rd
W. J. Heston	Carlson	1:01.1	4th	1:01.1	4th	1:01.1	4th
W. J. Heston	Carlson	1:01.1	5th	1:01.1	5th	1:01.1	5th
W. J. Heston	Carlson	1:01.1	6th	1:01.1	6th	1:01.1	6th
W. J. Heston	Carlson	1:01.1	7th	1:01.1	7th	1:01.1	7th
W. J. Heston	Carlson	1:01.1	8th	1:01.1	8th	1:01.1	8th
W. J. Heston	Carlson	1:01.1	9th	1:01.1	9th	1:01.1	9th
W. J. Heston	Carlson	1:01.1	10th	1:01.1	10th	1:01.1	10th
W. J. Heston	Carlson	1:01.1	11th	1:01.1	11th	1:01.1	11th
W. J. Heston	Carlson	1:01.1	12th	1:01.1	12th	1:01.1	12th
W. J. Heston	Carlson	1:01.1	13th	1:01.1	13th	1:01.1	13th
W. J. Heston	Carlson	1:01.1	14th	1:01.1	14th	1:01.1	14th
W. J. Heston	Carlson	1:01.1	15th	1:01.1	15th	1:01.1	15th
W. J. Heston	Carlson	1:01.1	16th	1:01.1	16th	1:01.1	16th
W. J. Heston	Carlson	1:01.1	17th	1:01.1	17th	1:01.1	17th
W. J. Heston	Carlson	1:01.1	18th	1:01.1	18th	1:01.1	18th
W. J. Heston	Carlson	1:01.1	19th	1:01.1	19th	1:01.1	19th
W. J. Heston	Carlson	1:01.1	20th	1:01.1	20th	1:01.1	20th



From right to left: Capt. Foster, Capt. Leontine, and Capt. Foster. Capt. Foster, Capt. Leontine, and Capt. Foster.

The Curtiss Leontine, winning last November, proved admirably suited to the Curtiss-Oreilly with clipped wings, and "Coney" sped over the course speedily in an unerring straight line, with beautifully true banks at the turns.

Wright-Bellanca Second

Frederick H. Bellanca, in the Wright-Bellanca plane, finished second, at the rate of 121.75 m.p.h. with (last L. Rose, first, at his best in an AWA at the rate of 121.5 m.p.h. These were followed by J. V. Anderson in a Curtiss-Leontine, A. L. Caperton in a Curtiss-Oreilly, M. A. Martin, in a Mayo-Orville H. B. Ireland, in an Ireland Comet, R. P. Lott, in a Thomas Moss 54E, and E. L. Heston, in a Miki monoplane. Members of the First District Group then took the air and maintained the speed with an exhibition of formation and tactical tactics. Whirling and diving, rolling and looping, the speedy group swept about through the air, their engines roaring wild, open in their power over the heads of the spectators.

To show their capacity also has a place in the air, as the Jerry-Young plane, with its fuselage placed out behind the pilot, glided about in front of the grandstand for a time, drawing a laugh from some of the most serious.

Liberty Engine Builder's Trophy

The first great international contest was the race for the

Liberty Engine Builder's Trophy. The race was won by Capt. Heston Leontine, and fourth place went to Capt. G. Foster O'Day, both of the French Army. Captain Leontine drove a Breguet 1925, as also did Captain O'Day, these two planes differing only in the engines with which they were equipped, the former being the more powerful of the two. The nearest competitor to the winning French pilot was Lieut. T. D. Hagley in a Douglas XIX machine, who finished at less than a mile per hour slower than Captain Leontine's speed.

This race was by far the most interesting event of the day, not only on account of the former competitors entered, but also because of the variety of types of planes entered by the United States Army and Navy.

There were 14 airplanes made up in representative teams. Then, the Army Air Service compiled 50 of these, all except one being standard Liberty D1H-6 planes, the Navy, three planes, consisting of one D1H-6, and two G2S-2 types of racing monoplane. The French War Department entered the two Breguet planes, one fitted with a Renault engine rated at 455.67 hp. by the standard committee, whereas the American standard at 2700 hp. engine was rated at 353 hp. The Army also entered one of the most interesting planes in this race. It was built around the Liberty standard Liberty engine. This construction of the French in a recent

GLENN H. CURTISS TROPHY RACE

Distance, 200 Miles—8 Laps

Plane	Driver	Time	Place	Time	Place	Time	Place
Carlson	Carlson	1:01.1	1st	1:01.1	1st	1:01.1	1st
Carlson	Carlson	1:01.1	2nd	1:01.1	2nd	1:01.1	2nd
Carlson	Carlson	1:01.1	3rd	1:01.1	3rd	1:01.1	3rd
Carlson	Carlson	1:01.1	4th	1:01.1	4th	1:01.1	4th
Carlson	Carlson	1:01.1	5th	1:01.1	5th	1:01.1	5th
Carlson	Carlson	1:01.1	6th	1:01.1	6th	1:01.1	6th
Carlson	Carlson	1:01.1	7th	1:01.1	7th	1:01.1	7th
Carlson	Carlson	1:01.1	8th	1:01.1	8th	1:01.1	8th
Carlson	Carlson	1:01.1	9th	1:01.1	9th	1:01.1	9th
Carlson	Carlson	1:01.1	10th	1:01.1	10th	1:01.1	10th
Carlson	Carlson	1:01.1	11th	1:01.1	11th	1:01.1	11th
Carlson	Carlson	1:01.1	12th	1:01.1	12th	1:01.1	12th
Carlson	Carlson	1:01.1	13th	1:01.1	13th	1:01.1	13th
Carlson	Carlson	1:01.1	14th	1:01.1	14th	1:01.1	14th
Carlson	Carlson	1:01.1	15th	1:01.1	15th	1:01.1	15th
Carlson	Carlson	1:01.1	16th	1:01.1	16th	1:01.1	16th
Carlson	Carlson	1:01.1	17th	1:01.1	17th	1:01.1	17th
Carlson	Carlson	1:01.1	18th	1:01.1	18th	1:01.1	18th
Carlson	Carlson	1:01.1	19th	1:01.1	19th	1:01.1	19th
Carlson	Carlson	1:01.1	20th	1:01.1	20th	1:01.1	20th

MERCHANTS ASSOCIATION OF NEW YORK RACE

Distance, 300 Miles—8 Laps

Plane	Driver	Time	Place	Time	Place	Time	Place
Carlson	Carlson	1:01.1	1st	1:01.1	1st	1:01.1	1st
Carlson	Carlson	1:01.1	2nd	1:01.1	2nd	1:01.1	2nd
Carlson	Carlson	1:01.1	3rd	1:01.1	3rd	1:01.1	3rd
Carlson	Carlson	1:01.1	4th	1:01.1	4th	1:01.1	4th
Carlson	Carlson	1:01.1	5th	1:01.1	5th	1:01.1	5th
Carlson	Carlson	1:01.1	6th	1:01.1	6th	1:01.1	6th
Carlson	Carlson	1:01.1	7th	1:01.1	7th	1:01.1	7th
Carlson	Carlson	1:01.1	8th	1:01.1	8th	1:01.1	8th
Carlson	Carlson	1:01.1	9th	1:01.1	9th	1:01.1	9th
Carlson	Carlson	1:01.1	10th	1:01.1	10th	1:01.1	10th
Carlson	Carlson	1:01.1	11th	1:01.1	11th	1:01.1	11th
Carlson	Carlson	1:01.1	12th	1:01.1	12th	1:01.1	12th
Carlson	Carlson	1:01.1	13th	1:01.1	13th	1:01.1	13th
Carlson	Carlson	1:01.1	14th	1:01.1	14th	1:01.1	14th
Carlson	Carlson	1:01.1	15th	1:01.1	15th	1:01.1	15th
Carlson	Carlson	1:01.1	16th	1:01.1	16th	1:01.1	16th
Carlson	Carlson	1:01.1	17th	1:01.1	17th	1:01.1	17th
Carlson	Carlson	1:01.1	18th	1:01.1	18th	1:01.1	18th
Carlson	Carlson	1:01.1	19th	1:01.1	19th	1:01.1	19th
Carlson	Carlson	1:01.1	20th	1:01.1	20th	1:01.1	20th



3 & 4 Places
Members of the first Ford Trimotor crew who flew from Schilling Field to the Air Race at Moffett. Left to right: Capt. Harry Hines, Captain Harry Hines, Lieutenant George H. R. Sweeney, and Lieutenant George H. R. Sweeney. All of the crew had the courtesy of Harry Hines and his wife, who were the first to fly in the Ford Trimotor. Hines, in the driver's seat, and his wife, in the home place, being checked off by Capt. Hines, Chief Pilot.

The spectators had been expecting a slow and stalling race between the two Cadillac planes of which no man had been heard but were to be disappointed on this account, for Williams and Berlin crossed the starting line at such long intervals that all sport of a race was entirely lost, the two planes going around the course several times over. They flew at approximately 260 ft. all the time. Very striking features of the start of each plane as it crossed the line was the absence of the customary dive in an endeavor to gain some speed. This, it will be recalled, was forbidden in the race by the N.A.A. after the Dayton Race last year, when they flying over the starting line in the Dayton race resulted in the deaths of Capt. Hans Klink's plane. Under the new ruling this year the airplanes of sponsored the latter's class in horizontal flight.

Another very noticeable feature observed as the Cadillac planes passed over the crowd on each lap was the considerable reduction in noise in this year's planes, the propellers making far less noise than those of the 1924. With such high-powered engines as the new Curtiss V-16 and the high revolution, at which these engines ran, this slowing is quite an interesting achievement.

The first lap made by Berlin was in record of the record ground average, speed for time on the 1924. With such high-powered engines as the new Curtiss V-16 and the high revolution, at which these engines ran, this slowing is quite an interesting achievement.

The race, owing to the distance which separated the planes, had lost all recognition in race and resulted itself into a straightforward speed trial. As it progressed it was noticed that Berlin was leaving his own record at each lap, whereas, just the opposite was the case with Williams, whose numerous laps were getting slower with the completion of the last in which he spent for that lap needed 340.8 m.p.h., as just what that for his first lap. However, his last time for the course, as a whole, was still going down, as will be seen from the table of results.

On the first lap Berlin's speed at the end of three laps had reached 245.7 m.p.h., virtually assuming a new closed circuit record, while Williams' speed at this lap was only 242.4 m.p.h. At the close of the race, four laps, Berlin had needed 240.7 m.p.h. and Williams 241.0 m.p.h. There was only 4.3 m.p.h. between the two. The picture Tokyo for 1925, but, in doing so, he had set a new world's speed record for a closed course. On crossing the line at the last lap, both took their places high into the

air and some crowd of spectators of the field, heading and turning up in the audience.

The Second Heat

At this moment, the four planes forming the second heat went off to compete for third place in the race. Then was for them the climax of a race in the second heat, since the planes, a P1 and P23 piloted by Lieutenant Horton and Captain Cook of the Army Air Service, and two Curtiss planes flown by Lieutenant Norton and Captain of the Navy, went off in their respective and closed their other at close quarters during the entire race.

As the planes started on their third lap, Norton in the P1, which was faster than the others, was leading with Norton and Cook following closely and Cook some 40 yards behind. It was interesting to note that the P1's nose by Norton and Cook were the same nose form as the Mitchell Trophy race start in the afternoon, but from the start they commenced making much better speed than in the course run. Lieutenant Norton was piloting No. 60 at a speed 8 m.p.h. faster than the speed at which Norton was the Mitchell Trophy. The fact was undoubtedly due to the difference in the length of the laps in the two races. The Mitchell Trophy race was twelve miles around, as compared with the 3.67 miles of the Pullman course. The former race, therefore, constituted more and sharper turns than the latter race and the resultant speeds for the two courses would differ accordingly.

Lieutenant Norton still maintained a good lead as the four planes started on their fourth lap. He was followed by Norton and Cook, while Williams was compelled, by engine trouble, to drop out. Captain Cook, by this time was at least a mile behind. The last ended with Lieutenant Norton finishing first, Lieutenant Norton a close second, and Captain Cook coming in third, a few seconds later. Lieutenant Norton's speed was 246.3 m.p.h. and Lieutenant Norton, flying a Curtiss plane, made 245.8 m.p.h. The speed difference was not far from the difference in the course of the Mitchell Trophy race and the Pullman race was apparent when it was recalled that the same type of plane as that flown by Norton in the latter race made only 165.5 m.p.h. in the former.

The successful, disconcerting sports made by the new Curtiss motor, as the Pullman Trophy race, may be attributed very largely to both the state of the course and the steady weather which prevailed. The latter consisted of 145 m.p.h. and the race was a continuous sail, so the Curtiss motor came up to the audience the race began to close out and afforded a small army of photographers opportunity to get good pictures of the winner.

The Dayton Daily News Trophy

The Dayton Daily News Light Airplane Trophy Race was among these events postponed from Oct. 9 to Oct. 13 on account of rain. When the race started at one o'clock, the weather was clear and calm, with a light breeze and a few wispy clouds at about fifteen miles per hour was blowing. It did not noticeably hinder any of the contestants. Two of the six entries—Tulley and Hines—had broken engines and finally landed across the starting line in order to get back their entrance fee. Carter Denny had a Kestrel-Denny engine fitted with a gear reduction for the propeller and a supercharger, which was expected to turn up with over 4000 r.p.m., and the machine was flown the morning of the race but, on the previous day, the engine gradually slowed down without apparent cause. Hines was also a reflection given by his Hines-Denny which did not function properly, in the great disappointment of the spectators, as the Hines machine appeared to have excellent form and was well constructed.

The Start

The Johnson Bendable Bee crossed some 150 ft. southeast in a new lap in its first lap with the center wing down. When the starting flag dropped, the Powell, flown by Jerry Deck, was the first to get a start. His back off after a run of about six seconds and started climbing steadily without hesitation. The Johnson Bendable Bee was not so well and with a slightly longer run. The Denny, flown by E. Denny and which, was no longer to be called "the Flying Dutchman" in the last attempt, it was not so well, and with a slightly longer run. The Denny, flown by E. Denny and which, was no longer to be called "the Flying Dutchman" in the last attempt, it was not so well, and with a slightly longer run. The Denny, flown by E. Denny and which, was no longer to be called "the Flying Dutchman" in the last attempt, it was not so well, and with a slightly longer run.

The race itself went off very smoothly, with no forced landings or other unforeseen happenings. One of the Denny's engines, which it is said had been at work on the ground since it began to operate. The Hines-Denny engine in the Johnson Bendable Bee was a good one, and the Denny made a good landing. The Hines-Denny engine in the Johnson Bendable Bee was a good one, and the Denny made a good landing. The Hines-Denny engine in the Johnson Bendable Bee was a good one, and the Denny made a good landing.

Powell Was Again

It was obvious after the first lap that there was no engine trouble that the Powell would come in first and the Johnson Bendable Bee would come in second. The Johnson Bendable Bee was a good one, and the Denny made a good landing. The Johnson Bendable Bee was a good one, and the Denny made a good landing. The Johnson Bendable Bee was a good one, and the Denny made a good landing.

Both Klink and Berlin landed their planes around the plane as if they had been lost in the race, in fact, both engines seemed to be in good condition. The Johnson Bendable Bee was a good one, and the Denny made a good landing. The Johnson Bendable Bee was a good one, and the Denny made a good landing. The Johnson Bendable Bee was a good one, and the Denny made a good landing.

The Powell completed 11.4 m.p.h. on the two laps, the Johnson Bendable Bee 10.4 m.p.h., the Denny 10.5 m.p.h. and the Johnson Bendable Bee 10.4 m.p.h. The Johnson Bendable Bee was a good one, and the Denny made a good landing. The Johnson Bendable Bee was a good one, and the Denny made a good landing. The Johnson Bendable Bee was a good one, and the Denny made a good landing.

The Detroit News Trophy

The Detroit News Air Transport Trophy, as the name implies, was originally intended to foster the development of large commercial transports (as, for several years, there were some of these built in this country, the contest granted only to the benefit of the industry). In previous years the weight carrying speed event has been hampered for exclusively by Berlin's planes. This year, however, both the Army and Navy had more modern equipment in the race, bombers, transport planes, torpedo planes and three-passenger planes, all being represented.

A Representative Group of Big Planes

Prior to the race up for the race, the Detroit residents were excited to see the big planes and as they watched up the track they were really a most impressive sight. There were four Marine bombers in the race accompanied with white wings and black stripes on the nose, only served to bring out the complexity of struts and wires. The new machines were all single low lighters, extremely close of line and serviceable looking. The new Duff, Redford bomber intended such attention, partly on account of its good line and also an account of its unusual propeller. The Duff's transport plane, which had flown all the way from the West coast and even in the race without changing motors, also attracted much attention at every stop. It was a very busy on the vicinity of the race track.

The planes all took off one by one according to schedule in a most orderly fashion, with not a single mishap. The Duff's engine was somewhat delayed by a lack of fuel. The most surprising take off was that of the Duff, Detroit.



International News Item
A Job of the Duff in the Detroit Trophy Contest

The machine and only engine a very short run and a slow speed but the propeller was turning over so slowly that it could be seen plainly and it was hard to realize that the plane was taking off and not landing.

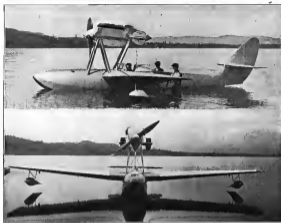
The first three 100 ft. planes were fitted with Wright engines and three listed Standard Sport propellers.

The Duff, Detroit Wins

Lieut. E. E. Horton of the Army, in a Duff, Detroit, was the first to take the prize money. He averaged 118.0 m.p.h. for the entire 120 m.p.h. and covered 118.0 m.p.h. in 100 ft. of the race.

To make this speed on a closed course the Duff, Detroit had to average about 120 m.p.h. on the straightaways. This plane made 118 m.p.h. on the race course at the Mitchell Field and Standard at 120 m.p.h. in the race on about the same of the speed trials.

Lieutenant Berlin coming in second on the Duff, Detroit with Wright T-1 engine, removed 1000 in. Lateral. He made 113.0 m.p.h. on the race course. D. W. Wells of the Army was third in the Duff, Detroit at 113.0 m.p.h. Lieut. Valer D. Detention of McCook Field, is a similar plane, landed at the end of the seventh lap.



Two views of the Mouch II racing flying boat representing Italy in The Schneider Cup Race.

History of the Schneider Cup

The Schneider Trophy and substantial money prizes were first offered by Baron Schneider, a French aviation enthusiast, in 1913, when the first race for the trophy was held at Monaco. The distance to be flown in the first Schneider race was 436 nautical miles (1724 1/2 land miles), or 279 km. The race was won by the famous French pilot, Frenot, who won three *Supermarine* biplanes with 150 hp Gnome engines. Frenot's time for the 426 km was 3 hr. 46 min. 28 sec., corresponding to an average speed of 124 km/hr. (157 1/2 m.p.h.). The 1924 Schneider Cup Race was also held at Monaco, and was won by a total distance of 368 km. The race was won solely by C. H. Howard Frenot, who was flying a *Supermarine* biplane with 500 hp Gnome Monocoupe engine. Frenot's time over the 368 km was 3 hr. 6 min. 13 1/2 sec. corresponding to an average speed of 130.7 km/hr. (161.5 m.p.h.).

Owing to the war, no race was held until 1931, when, as English pilot landing won the race in 1934, the Schneider Cup Race was held at Bournemouth, England. On the day of the race there was a thick mist over parts of the course at Bournemouth, periodically around the buoy marking point, and all the competitors gave up with the exception of the Italian pilot, Bartola, flying a *Servis* biplane. Bartola covered the prescribed number of laps, but as he was not seen from the Bournemouth beach, there was considerable discussion as to whether or not he had properly completed the course. Finally it was decided to award the race, but as a consolation to Bartola's plane in flying round the course despite the adverse weather conditions, it was awarded to the Italian Aero Club the organization of the race for the following year.

The 1935 Schneider Cup Race was, therefore, held at Venice, and was won by the Italian pilot Bologna, who, in a *Servis* flying boat, covered the 279 km in 3 hr. 30 min. 25 sec., at an average speed of 124.6 km/hr. (110.7 m.p.h.). Frenot was again chosen to fly plane for the 1931 Schneider Cup Race, which was won of 270.4 km. The race was again won by a *Servis* flying boat, piloted by the Italian, De Bencenzi, whose time was 3 hr. 4 min. 59 sec., corresponding to an average speed of 125.5 km/hr. (112.1 m.p.h.).

A British machine won the 1932 Schneider Cup. If the race had been won by an Italian pilot, the Schneider trophy would have become the property of Italy, as it would then have been won three times in succession. The *Supermarine* "Sea Scout" biplane won the victory at Naples, piloted by Capt.



Photo Underwood & Underwood
A Final Pilot in the British Gloster-Nieuport III



Photo Underwood & Underwood

The Gloster-Nieuport III, one of the two British Schneider Cup planes in race at Bournemouth

H. C. Baird, who in piloting the *Supermarine* at Bournemouth this year. The *Supermarine* boat, which was equipped with a *Servis* "Lion" engine, covered the distance of 280 km. in 1 hr. 24 min. 51.35 sec., at an average speed of 234.6 km/hr. (145.7 m.p.h.).

The 1932 race having been won by a British pilot, the 1933 race was held in England, Green being chosen for the race. Only two British defendants had been built for the 1933 race, and one of these, a Blackburn "Pilot," took during an attempt to take off in the storming trials, leaving only the *Supermarine* flying boat to defend the cup. The British machine was hopelessly outclassed in point of speed, and the race was easily won by Lieutenant Hildesheim, on a *Curtiss* "Raven." Hildesheim covered the 345 km. at an average speed of 177.20 m.p.h. (285.5 km/hr.).

A British challenger had been built for the 1934 Schneider Cup race by the Gloucestershire Aircraft Company, but this machine was wrecked during a test flight, and as no other machine presented themselves at the race, the Americans declared the 1934 race off.

This year the Schneider Cup race at Bournemouth may be expected to result in the greatest contest ever held.

In addition to three British races, which are going to be flying with faster, there are two British entries, the *Supermarine* "Sea Scout," a boat type monoplane, and the Gloster

Nieuport III, a biplane, also of the two boat class. Italy will be represented by a flying boat monoplane of somewhat novel design.

A good race is expected, especially as very fast speed performance is anticipated from the Italian *Supermarine* 36 and a good contest may be looked forward to between the machine and the *Curtiss* "Raven."

New Type of "Jenny"

The Royal Air Force at the Warfield Aerodrome, Bedford, Ohio, are rebuilding a *Curtiss* "Jenny" with seats designed so that both pilot and passenger can carry parachutes.

Metal seats, of a new design, have been installed for this purpose. As previously mentioned, the tried-and-true "Jenny" was not suitable for parachutes. Owing to the extremely large number of these planes in service, particularly in view of the fact that this type is used in training camps by Reserve and National Guard officers and by others not accustomed to confusion flying, the need for parachutes and equipment has been most urgent.

These improvements were made under the direction of Capt. Edward Luskalla, chief engineer here. Other officers assigned to the Engineering Department are Lieut. C. C. Kerr, L. H. Dunlop and Miss McCune.



M. M. Joseph Carrier "Falcon", Britain's latest aircraft carrier coming off Plymouth

LIGHT PLANES AND GLIDERS

Edited by Edmund T. Allen

Induced Drag Again

The following letter from a reader of AVIATION is of general interest and, with its answer, is published because of the popular misconception often arising about the subject of induced drag.

Dear Mr. Allen:

I would like to ask a question which I find no means of answering, far myself from engineers or from books at my local library. You have mentioned induced drag in many of your articles. It seems that this has something to do with span, and yet you also said it was proportional to the weight of the airplane. I cannot understand how drag, which means the resistance to forward motion, can have anything to do with the plan form of the wing or with the weight, since the plan form does not resist forward motion, and the weight acts at right angles to drag and can consequently have no component to the drag direction. If a simple explanation could be given, I would very much appreciate knowing it.

A. ————— E. —————

There are several articles and reports dealing with induced drag. One is called "General Hypothesis Theory" by Max Munk, N.A.C.A., Washington. Another is by the organizer of the theory of induced drag, Professor Prandtl, also published by the N.A.C.A. One is called "Vortices in Aviation" by W. H. Lichten.

It is not true that the induced drag of an airplane is de-

termined into two the liftless theory. This may be explained by assuming that the energy which must be used to overcome the induced drag is expended in giving a downward velocity V to the mass of air M induced in a cylinder whose area is the line of flight, whose diameter is the span of the wing, and whose cross-sectional area is thus πs^2 . This energy will be equal to — MFV , and it is obviously desirable to produce

the lift by making the Mass (which seems to be the first power only) as large as possible, and the downward velocity induced in it as small as possible. Induced drag is so small.

If the elements of lift are separated by a certain gap g , the cross-sectional area of the cylinder of air is increased by the area gV . As the gap is increased the mass of air affected is correspondingly increased and the downward velocity required to produce a given lift reaction is decreased. Carried to the theoretical limit of the concept, the loss of induced span would require zero downward velocity and the induced drag would be like a mass of air pushed over. Or, with a given span, an increasing gap would tend to play an increasing mass of air which would cause the induced drag to approach \sqrt{W} .

It is simple to see, so you say that the induced drag of a monoplane may be reduced to approximately one-fourth by doubling the span, if the weight remains constant. Or, with constant span and weight it may be reduced approximately one-fourth by using a biplane of equivalent span.

This definitely in design is obviously that one must keep the weight constant as one increases the span, in the one case, and that in the other case, one must add positive drag in the form of added struts and wires or additional "profile drag" in thickening up the wing the house the structure inside it.

The nature of the monoplane that is eventually needed is a structure of masses in light plane design, for the power required to overcome induced drag may be as much as one-half the total drag, and its reduction is of vital importance where efficient flight is desired. That these factors are not appreciated by standard designers is only too plain when one looks at the usual spans of single-engine aircraft. Where one has unlimited power and its waste is unimportant, one can afford to neglect induced drag as one can neglect parasite. In light planes, however, its appreciation is a measure of progress in design.



The Duxford L27 lightplane which was first in Class A at the Gordon Bennett.

pendent to the plan form. It is the front direction and the weight which determines induced drag for any given speed. It is proportional to mass induced divided by weight squared, with a constant in the denominator depending on the number of wings (i. e. whether monoplane, biplane, etc.), the gap, and the velocity. The easiest way of considering it is to compare that the airplane is flying level in like a man walking in a line and which steps down and back with every step. The total, like the air goes up under the weight, and the man must constantly duck in his own "downward" obviously the amount of this "drag," for anything which produces disturbance or turbulence will be drag at the expense of energy and will manifest itself as drag, will depend on the weight which the fact is used as the wing is air used support, and its span is right again in the direction of its motion.

The mathematical content is based on the concept of the lifting line, i. e., the front view of a wing of zero parasite drag. The induced drag is thus dependent on the lift (or weight) per unit of span.

Doubling the induced drag between two superimposed lines

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AIRPORTS AND AIRWAY

Massachusetts

By Ralph S. Eddy

The Mid-West Airways Corporation has been appointed as distributor for the Waco airplanes, one of the last new commercial airplanes on the market, for the state of Illinois including Chicago and Cook county. Officers of the local company recently concluded a contract with the Advance Aircraft Co., of Troy, Ohio, holders of the plane, for the state region. Delivery on the first plane has been promised by Oct. 25. Numerous inquiries have already been received and a good second sale is anticipated.

Four army Delivered planes from Chicago Field, Randolph, Ill., stopped to refuel at the government field here on Tuesday, Sept. 28. The planes were enroute to St. Joe, Mo., where they were to make a two day stop, before going on to Ft. Leavenworth and Fort Riley, Kan. In the planes were Lieutenants Hickey, Hadden, Hart, Paul, Johnson and Peterson.

Three planes belonging to the Mid-West company flew to Kansas on Tuesday, Sept. 28, to be present when the planes in the Ford Reliability Tour stopped there. Nine land on two such the trip.

The first stage of the radio beacon work at the Air Mail Development Field has been completed, according to Carl Hempel, assistant radio engineer, who is in charge of the work. The initial work has been pronounced a success and a new project, work on 81 m. wave length, will be started.

at most. The original between transmitter was operated on 397 and 1658 m.

The Mid-West company recently produced a New Standard from the Alexander Aircraft Co. of Denver, Colo. John Livingston took delivery of the plane at Denver and flew it home. It is being used for general passenger work.

Opening of New Flying Field at Irvington, Va.

The flying field at Irvington, Va., established through the patriotic efforts of Colonel Kewell, retired, was the scene of great activity on the morning of Sept. 7. From the north, east, south and west came 300's of Army Messengers, Co's, "Jays" and many other types of planes. The Army, Navy and Marine Corps were all represented by planes, officers and men. The delegates from Langley Field, Va., consisted of seven DRE's, one COA and eleven JRE's. Ten of the JRE's were under the command of Capt. Louis Bonnell of the Massachusetts National Guard, and were flown by National Guard officers on duty at Langley Field. A breakfast was offered, a few short speeches were made, and the field accepted for use of the Army, Navy and Marine Corps, by Colonel Chapel, representing Major-General Patrick. After formalities, business was served. Private children, and every-thing that goes with it and work made up the scene. In the afternoon several maneuvers in the vicinity of the field were conducted, and a dinner in the evening rounded out the day, most pleasantly spent among most hospitable people, all of whom are Air Service enthusiasts.

St. Louis News

By R. C. Deane

The week of Sept. 28 was rather a stormy week at St. Louis field as it rained most of the time. Most of the employees of the Robertson Aircraft Corp. are devoted to their airplanes, none believing that it was Don Robertson's fault in leaving his newly furnished Deane's plane and not surface out where other cars could get on them and others believing that it was the airplane that was not looking around and seeing where the storm was going to. Actually, most of the employees believe it was Don's fault and Don and his help helped and maybe one or two others, believe that it was the storm's fault. But, the storm and the surface will have to be repaired and mended.

The Robertson Aircraft Corp. is working its Order and DRE's for the next contract. They are certainly benefited.

We regret to remember that these different species of bugs, ants, beetles or anything you wish to call them have been discovered at the field. They have been found in the past by the post office. First, there is the love beetle, of which there are two good specimens, one much better than the other. (Note 1)—these are present specimens. Then, there is one very common beetle bug which does nothing but run about. We claim that there is only one specimen of the third type to be found in the wide world. This is the 100 bug. He goes very slow DRE's, even making them, he walk to see them go around. We believe that this is the only an original DRE bug (Note 2)—the 100 bug and DRE must be continually at war over the weeds of the different sections.

Three Travel Air and one Laird visited the field during the past week and Edna Johnson was here with her friends.

This Sunday, the writer, with Don Robertson, went over to the new Farmstead road track, where Don made an excellent landing in a rather soft field.

Last Sunday Ben Rickett took Al Koser over the city for a periscope drop, which was made mostly in the center of the field. The two men's first experience of this kind is better than he has lived a safe and manly life's life.

From St. Louis to Share by Plane

Albert C. W. A. Bishop, the Committee man, who was actually confined with having brought down seventy-five airplane pilots, has returned a new destination by being the first person to be taken by airplane from a station coming to New York. Last Oct. Bishop came to New York on the Monogram, to attend the Air Show. He was met at Quantico by Capt. Edna Hildebrandt, the Assistant Air. A very early lunch in a restaurant of lunch, June 7, 1923, and W. T. Mills enjoyed the two men in a Vought (he pointed to Louis Gaudin, R. O. McDonald). In this he was taken to Glen Cove, N. Y., where he is staying at the name of Henry P. Dwyer.

Berlin Airport Reorganized

The Berlin Air Port Co., which controls the Tempelhof Field in Berlin and is the center of the German Commercial Air Service, is under process of reorganization. Under the old arrangement, 25 per cent of the share were held by the city of Berlin and 25 per cent by the Ministry of Transport. The new scheme the City of Berlin will retain 50 per cent, and the remaining 50 per cent will be divided between Prussia and the Reich. The new scheme has brought out active part in financing the various anti-aircraft air lines, but has suspended antiaircraft reports and police service.

The long negotiations with the Turkish Government have been successful and the Turkish Company will probably operate the service from Turkey to North America. A new air service has been established in Berlin, operating between Berlin, Mannheim and Frankfurt, with landings at Freiburg and Baden-Baden.

THE WACO NINE



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Fort Worth, Texas

By Geo. F. Diebel

Fort Worth now has a landing field of 160 acres at the North of the center of the business district. At present the field is being leased from the city but the lease carries a five year option for the purchase of the property and it is hoped that this can be brought about within the required time. Country roads are being pointed for various points and there have a way on the bank showing the recent location of the field. At the present time the government has a new structure at the field to take care of any government ships landing there. Fifty-three government planes landed on the field in one day in September the winter taking charge of the maintenance for the new and from the city. The flying club gets the stream a landing, which would be a good service, although the arrangements were made in just a few hours.

The Fort Worth Flying Club now has 50 members fully paid up. Of these 37 are men and 13 are women and their ages.

Fort Wayne News

By M. K. Kalka

Paul Holcomb recently made a trip to Buckman, Maine, and brought back one of the Covert's advertisement in *Aviation*. He was much pleased with the clip and the treatment he received.

The Ford triplane has one man and pilot. A big crowd was present and the weather was good. Everybody was pleased and a very different situation prevailed than at St. Louis and Dayton. Ferdy had just returned from a visitation from the Ford and factory.

In taking off, it seemed that the Ford was the slowest—then came Ferdy's clip and the Curtiss Currier Diggins. It is, however, difficult to judge such things exactly and the planes were differently loaded. The red, Waco, Southern, Ford,

Moroney Jr. and Tantal Am, gave average take off performance. It seems that they are all something like all ability and that a good OXN (Cordell) would have been one of them in connection of get away.

The Moroney Jr. set alongside the Ford plane. It looks like a big by comparison, yet it would perhaps carry less than that of the Ford and it looks as if it would be the thing after all. The Ford plane with its three Wright engines totaling 600 h.p., took off with surprising speed.

One boy made the records and was unable to find any manufacturer with a ship for immediate delivery.

Casualties Observing Sabbath

J. W. Hunt, of the Third Electric Co., Dayton, Ohio, was bound to the grand jury of Hamilton County by Judge B. D. Deisher of St. Mary's on a charge of operating an airplane for profit on Sunday.

The charge was authorized by L. E. Fry, being in the vicinity of a flying field operated by the Dayton area at St. Mary's. This is the worst charge that Hunt had met 'twice previously' observe the Sabbath in taking passengers for rides in his airplane as Sunday.

Hunt made the flight to observe building jobs in and as his plan for an answer made between Dayton and St. Mary's. He pleaded not guilty in a hearing before Judge Deisher and was bound to the grand jury.

French Flier Held by Germans

Danaborn Cuts, the French aviator whose machine crashed in Germany on Sept. 14, while he was attempting a flight from Strasbourg to England, was released on Sept. 20 and returned to France. Cuts was held a virtual prisoner at Herberich by Germans after the crash and was finally released only after paying a fine of 5,000 gold marks for flying over German territory without permission.

New York Department Store Sells Planes

John Wausonier has opened up an unaccounted department. The first store to put an exhibition in a third Air Palace which was shown from the Ford Airport at Detroit. The plane landed at Curtis Field, Long Island on Oct. 5 after a flight of four and one half hours from Cleveland when it had stopped at various points. The plane was on exhibition at the field for a couple of days during the six weeks and was then dismantled, loaded to New York and set up in the store.

The pilot, Jerry Blum, delivered a personal letter to William Wausonier written by Henry Ford, who said: "We take great pleasure in knowing that the first Ford-built airplane is in delivery to a customer as long as John Wausonier. Having no mind that the Ford car department in the New York Store, such as your company, we want to take the opportunity to congratulate you for the material improvements that have been shown, and no wish to express our best wishes for your continued success and prosperity."

The Wausonier Store is also making the possibility of establishing a passenger and repair service between New York and Ford. Ford planes will be used and engines of the Ford Motor Company are now working suitable landing fields between the two points.

San Diego News

Mr. Goldstein, owner of the (Mad) Aircraft Co. has completed a three plane side OXN plane fitted with a Clark "P" wing system. The plane was on test in the tests that the wing does all work in the support of Mr. Goldstein's test. The plane seemed to fly most successfully in spite of the wing system.

The owners of the Ryan Airline shop is building a glider over the same wing system, and once being very popular as the West Coast. It is assumed that if the glider is a success that it will probably be fitted with a four plane system and run between Los Angeles and San Diego as a regular schedule. The Ryan Airline is fitting up a fairly modern Douglas for passenger service between Los Angeles and San Diego during the coming season. It is assumed that the plane will carry twelve passengers and that a buffet lunch will be served on board.

Tokyo—Paris

On Sept. 28, Major Ishii and Mr. Kurohara, who were flying from Tokyo to Paris and London in two Japanese-built Diggins, A.K. airplanes (1000 h.p. Aeromarine-Hirth engines), flew from Berlin to Strasbourg in 5 hr. 48 min., in very hot weather. They were welcomed on landing by the French civil and military authorities.

On Sept. 29 they arrived at Le Bourget, leaving from Strasbourg in three hours, accompanied by an escort of French military airplanes. They were greeted on arrival by St. Leger Ryan, the French Chief Secretary of State for Air, and a large crowd of interested spectators.

The flight was organized by the Japanese newspaper *Asahi*, by way of returning the favor made by Captain Pichard *Asahi* in Tokyo last year.

Following is the itinerary—

July 28, Tokyo—Osaka, 486 km.; 27, Osaka—Tientsin, 520 km.; 28, Tientsin—Hankow, 360 km.; Aug. 1, Hankow—Shanghai, 400 km.; 2, Shanghai—Tientsin, 420 km.; 3, Tientsin—Shanghai, 400 km.; 4, Shanghai—Tientsin, 420 km.; 5, Tientsin—Shanghai, 400 km.; 6, Shanghai—Tientsin, 420 km.; 7, Tientsin—Shanghai, 400 km.; 8, Shanghai—Tientsin, 420 km.; 9, Tientsin—Shanghai, 400 km.; 10, Shanghai—Tientsin, 420 km.; 11, Tientsin—Shanghai, 400 km.; 12, Shanghai—Tientsin, 420 km.; 13, Tientsin—Shanghai, 400 km.; 14, Shanghai—Tientsin, 420 km.; 15, Tientsin—Shanghai, 400 km.; 16, Shanghai—Tientsin, 420 km.; 17, Tientsin—Shanghai, 400 km.; 18, Shanghai—Tientsin, 420 km.; 19, Tientsin—Shanghai, 400 km.; 20, Shanghai—Tientsin, 420 km.; 21, Tientsin—Shanghai, 400 km.; 22, Shanghai—Tientsin, 420 km.

Sept. 18, Moscow—Kishinev, 1718, Kishinev—Berlin, 36, Berlin—Strasbourg, 28, Strasbourg—Paris.

The fact that Japanese aviators have been permitted to fly along the trans-Siberian railway (Russia's great strategic line) by the Soviet government shows how and in the absence between Japan and Russia. The flight was only here made with the same assistance of the Russian authorities, who obviously provided fuel and mechanical help. The performance is a further proof that we must trust our future success with due respect.



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United States Air Forces

U. S. ARMY AIR SERVICE

Summer Training Activities at Maxwell Field

The summer training activities held at Maxwell Field, Montgomery, Ala., which included the training of the Advanced Galt, D.O.T.C. (Air Service), Georgia School of Technology, the 30th and 31st Observers Squads, Tennessee and Alabama National Guard, respectively, were closed to a successful close on Aug. 31. Each expression indicated the opinion that the 1925 season was the best ever held at Maxwell Field, and it is believed that these opinions were due to the fact that the training was complete advanced from previous years. The interest displayed in all in training was extraordinary in every respect and served to reward for the regular Air Service personnel who rendered their best efforts for a successful camp. Below is given the time hours of each separate camp.

D.O.T.C. Student, 108 hr. 25 min.; Reserve Officers, 410 hr. 5 min.; National Guard, 686 hr. 45 min.

The National Guard squadrons of Tennessee and Alabama were in training at Maxwell Field during the month of August. The following is a classification of the records for these squadrons:

Crew-observers, 300 hr. 10 min.; Reconnaissance, 70-90; Photographic, 10-15; Infantry Contact and Liaison, 1-36; Personnel, 52-15; Observers, 77-13; Artillery Observer, 3-59; Frontier and Training (Dual) 229-30; total service hours—480-93.

Aerial Maps of Proposed National Parks

A section of approximately 1500 sq. mi. in the Blue Ridge Mountains of Virginia, considered from Front Royal to Washington, is being photographed by Lieut. C. L. Williams and Staff Sergeant J. J. Barnhill of the 2nd Photo Division, stationed at Langley Field, Va. In addition to the standard photographic work in Virginia, aerial maps will be constructed from photographic prints of proposed National Parks in North Carolina and Tennessee.

Due to the extreme difficulties in the area of the Blue Ridge Mountains, the work is being done at a altitude of 15,000 ft. The project has been going smoothly, and if the weather is conducive to efficient photographic work this fall, the project will be brought to a successful conclusion at the next delivery. The film after being exposed is shipped by Lieutenant Williams to the 2nd Photo Division where it is developed, printed and the mosaic completed.

The work in and over the Blue Ridge Mountains is temporarily delayed while Lieutenant Williams and Staff Sergeant Barnhill complete the photographic of the boundary around the Great Smoky Mountains National Park in the vicinity of Knoxville, Tenn. Upon completion of the work over the Smoky Mountains National Park, Staunton, Va., will be again used as a base for the completion of the project in the Blue Ridge Mountains.

Lieutenant Williams and Sergeant Barnhill reported in for supplies and equipment of their plane from Knoxville, Tenn., on the afternoon of Sept. 1st, after a night flight in a De Havilland over a distance of more than 100 mi. in a 12-38 min.

About 60 per cent of the personnel at the Laboratory of the 2nd Photo Division at Langley Field developing the proposed film and attempting completing the project until the finished results are produced at the Air Service School at Chanute Field. A report by the Commanding Officer in given when the Commanding Officer of that Section asserts that "it is hoped in the near future to bring the organization up to 100 per cent production of the Photographic School at Chanute Field."



There are no landing fields in the air

Flying into the unknown—some planes for day after day—days of desert and empty—empty over rugged terrain, vast expanse of desert land, black sea, moon, open sea . . .

At any moment a slight error in navigation—an imperceptible missteering—may spell destruction to the brave men exploring the corners of the world. Then a tiny corner study their maps so carefully before each flight. They plan their route as fast, as surely as possible, they use their radio compass of a sort whose a tested compass can be made.

Considered from this viewpoint, how important is the absolute accuracy of our maps? With their lives perhaps at stake, aviators rely on the Rand McNally Maps for all their needs. And, precisely because of this reason, every map that leaves the hands of Rand McNally & Company is as accurate and up to date as human skill and science can possibly make it.

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Wire Transmission of Photos Developed in Flight Successfully Tested

Twenty-two and one-half minutes after Lieut. George W. Goldard of the United States Army Air Service, flew in a Bellanca plane over Fort Leavenworth, Kan., on Oct. 2, last, photographed the portion of a theoretical runway, the picture developed in the air and transmitted by the American Telephone and Telegraph Company was in the hands of the Corps Commanders in New York, Chicago and San Francisco.

In taking the photographs it was assumed that a theoretical runway had established its position somewhere in the vicinity of Fort Leavenworth and that the commander of the Second Corps Area, General Sweeney, had been directed to attack. To enable the commander to make proper and effective disposition of his forces, he required a photograph of the enemy's position which would be his, Lieutenant Goldard, on Oct. 2, last, with the plane in the air, sent a signal with a pilot in an Bellanca, it, located and photographed the runway position and developed the negative while he was in the air, the second photograph taken.

The developed photographs showed that an enemy's direct forward enemy had established its position within the United States Army barracks at Fort Leavenworth.



Waco's Head Division A. E. White tested in Nevada Field, Tenn.

Lieutenant Goldard was in the air for 20 minutes, at 10,000 ft., and he developed the developed negative by parachute in the transmission station in Fort Leavenworth, and Lieutenant Goldard, without having landed, returned, theoretically, to the command headquarters of the enemy's position.

At 10:05 p.m. the photograph, fully developed, was put on the wire. It was placed in the hands of Maj. Gen. Charles P. Sweeney, commander of the Second Corps Area, at 11:05 p.m. on Oct. 11, 1925. In connection with the event Colonel Knicker was.

"This demonstration of the aerial photograph developed by the Air Service and transmitted by the American Telephone and Telegraph Company opens a new field of very practical achievement. In war it will prove invaluable. It will save time, not only in the transmission of what is necessary to fight this communication, but also to guard headquarters, and if necessary throughout the country."

"Today's demonstration shows that in the next war airplanes will fly over enemy lines, take their photographs and during the return flight develop the pictures and lay them out on the ground. The development process in the air requires some seconds."

Self-Developing Field

A combination of the low speed and a flashless camera caused a daylight darkness in Detroit, which resulted in many casualties in the streets. Members of the first patrol group, which had left Self-Developing Field on a flight in Washington, was told a lion attack at Toledo and nine of the twelve planes turned back. The attack caused the return signal in the ground and landed at the Toledo Field.

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Most of you do not want to be shot through the air in a Pultizer racer at cannon ball speed, but right at this moment the air service has been designed to the point where your letters which go by air are safer and three times faster than if they went by the regular registered mail.

Since 1908, when Glenn Curtiss won the *Scientific American* Trophy for the first personally announced public flight ever achieved in the United States, in each department of aeronautics in which attainment has been desired, the Curtiss organization has surpassed all competitors.

These tests have made possible the finest flying places in the world. They have not only produced in Curtiss more than the greatest power and strength for weight, but they mark the greatest advances in aeronautical engineering, whether it be the airplane wing, the wing radiator, the motor propeller, or the host of minor improvements, all outstanding examples of Curtiss creative activity.

The net result is a commercial plane of thoroughbred strain, low sailing price, and high performance.

America stands today on the very threshold of commercial flying. Your business letter of unknown length, now this afternoon, can be delivered in Chicago by air mail before banks open tomorrow, for less than you can send a fifty word night message. Curtiss now offers two commercial machines—The Curtiss Pylon, selected by the National Air Transport for its trunk line—the Lark, a smaller machine suitable for feeder lines and other commercial use.

With these models as a nucleus, the Curtiss organization will do for commercial aviation what it has already done for National Defense.

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"The car came through with a perfect score," wrote Lieutenant Wade after driving his Packard eight hours, Los Angeles to New York—3600 miles—without either car or motor once coming to a stop.

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